



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,729	09/29/2003	Toshiki Taguchi	Q77753	6734

23373 7590 04/28/2005
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

KLEMANSKI, HELENE G

ART UNIT PAPER NUMBER

1755

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,729

Applicant(s)

TAGUCHI ET AL.

Examiner

Helene Klemanski

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

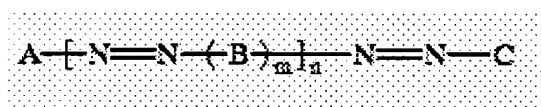
Art Unit: 1755

DETAILED ACTION***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

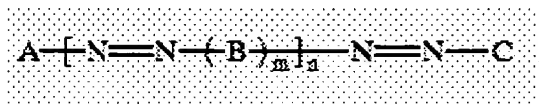
2. Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a black ink for inkjet recording comprising a dye of the formula



wherein A, B and C each independently represent an aromatic or heterocyclic group, which are substitutes or unsubstituted; m is 1 or 2 and n is an integer of 0 or more, dissolved and/or dispersed in an aqueous medium wherein the dye has the properties as claimed by applicants, does not reasonably provide enablement for a black ink for inkjet recording comprising a dye dissolved and/or dispersed in an aqueous medium wherein the dye has the properties as claimed by applicants. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The claims recite a black ink for inkjet recording comprising a dye dissolved and/or dispersed in an aqueous medium wherein the dye has the properties as claimed by applicants. This encompasses any dye that has those properties. However, the specification only teaches the use of a dye of the formula

Art Unit: 1755



wherein A, B and C each independently represent an aromatic or heterocyclic group, which are substitutes or unsubstituted; m is 1 or 2 and n is an integer of 0 or more.

Such a limited disclosure does not support the breadth of the instant claims. The examiner suggests the incorporation of claim 12 into claims 1-4 to overcome this rejection.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3 and 6-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 3, 6, 8 and 10, the phrase "JIS code 2223" is considered vague and indefinite since it unclear what this code is or what it does. The examiner can find no disclosure of the particulars of this code in the specification. Please clarify.

In claim 14, the phrase "which comprises a dye of the formula (1)" is considered confusing since it is unclear as to which dye in claim 2 applicants are indicating is of the formula (1). The examiner assumed applicants intended that the first dye in claim 2 is to have this formula and examined as such. Please clarify.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

Art Unit: 1755

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 3-7, 10-13 and 16-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 10/809,550 (US 2004/0187738) in view of Causley et al.

The claims of copending Application No. 10/809,550 teach an ink obtained dissolving an azo dye of the formula



wherein A_{41} , B_{41} and C_{41} each independently represents an aromatic group, which may be substituted, or a heterocyclic group, which may be substituted. See claims 1, 2, 4 and 5 and para. 0430. The claims of copending Application No. 10/809,550 fail to teach the addition of a chelating agent as claimed by applicants.

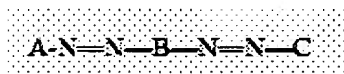
Causley et al. teach an ink jet ink set comprising a cyan ink, a magenta ink a yellow in and further contains a black ink. Causley et al. further teaches that a chelating agent may also be added to each ink of the ink set. See claims 1, 2 and 10.

Therefore, it would have been obvious to one having ordinary skill in the art to have added the chelating agent of Causley et al. to the ink composition of copending Application No. 10/809,550 since Causley et al. disclose that a chelating agent is a well known additive to ink jet ink compositions.

This is a provisional obviousness-type double patenting rejection.

7. Claims 1-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4-8, 10 and 11 of copending Application No. 10/714,945 (US 2004/0154496) in view of Causley et al.

The claims of copending Application No. 10/714,945 teach an inkjet black ink comprising a dye of the formula



wherein A, B and C each independently represents an aromatic group or a heterocyclic group which may be substituted and optionally another dye having a λ_{max} of 350-500 nm. See claims 1, 2, 4-8, 10 and 11 and para. 0256. The claims of copending Application No. 10/714,945 fail to teach the addition of a chelating agent as claimed by applicants.

Causley et al. teach an ink jet ink set comprising a cyan ink, a magenta ink a yellow in and further contains a black ink. Causley et al. further teaches that a chelating agent may also be added to each ink of the ink set. See claims 1, 2 and 10.

Therefore, it would have been obvious to one having ordinary skill in the art to have added the chelating agent of Causley et al. to the ink composition of copending

Application No. 10/714,945 since Causley et al. disclose that a chelating agent is a well known additive to ink jet ink compositions.

This is a provisional obviousness-type double patenting rejection.

8. Claims 1, 3-7, 10-13 and 16-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4, 6 and 7 of copending Application No. 10/808,464 (US 2004/0187736) in view of Causley et al.

The claims of copending Application No. 10/808,464 teach an ink set comprising inks wherein each ink contains at least one dye such as an azo dye having at least one heterocyclic group. See claims 1, 2 and 4-8 and para. 0399. The claims of copending Application No. 10/808,464 fail to teach the addition of a chelating agent as claimed by applicants.

Causley et al. teach an ink jet ink set comprising a cyan ink, a magenta ink a yellow ink and further contains a black ink. Causley et al. further teaches that a chelating agent may also be added to each ink of the ink set. See claims 1, 2 and 10.

Therefore, it would have been obvious to one having ordinary skill in the art to have added the chelating agent of Causley et al. to the ink composition of copending Application No. 10/808,464 since Causley et al. disclose that a chelating agent is a well known additive to ink jet ink compositions.

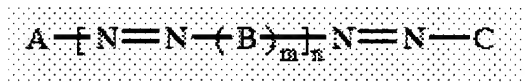
This is a provisional obviousness-type double patenting rejection.

9. Claims 1-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4-8, 10 and

Art Unit: 1755

11 of copending Application No. 10/671,736 (US 2004/0080596) in view of Causley et al.

The claims of copending Application No. 10/671,736 teach a black ink comprising a dye of the formula



wherein A, B and C each independently represents an aromatic group or a heterocyclic group which are substituted or unsubstituted and optionally another dye having a λ_{max} of 350-500 nm. See claims 1-19 and para. 0253. The claims of copending Application No. 10/671,736 fail to teach the addition of a chelating agent as claimed by applicants.

Causley et al. teach an ink jet ink set comprising a cyan ink, a magenta ink a yellow in and further contains a black ink. Causley et al. further teaches that a chelating agent may also be added to each ink of the ink set. See claims 1, 2 and 10.

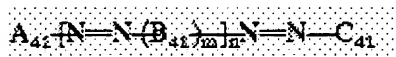
Therefore, it would have been obvious to one having ordinary skill in the art to have added the chelating agent of Causley et al. to the ink composition of copending Application No. 10/671,736 since Causley et al. disclose that a chelating agent is a well known additive to ink jet ink compositions.

This is a provisional obviousness-type double patenting rejection.

10. Claims 1, 3-7, 10-13 and 16-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4 and 7 of copending Application No. 10/806,453 (US 2004/0187734) in view of Causley et al.

Art Unit: 1755

The claims of copending Application No. 10/806,453 teach an ink jet ink set comprising at least two inks each containing at least one dye of the formula



wherein A_{41} , B_{41} and C_{41} each independently represents an aromatic group, which may be substituted, or a heterocyclic group, which may be substituted. See claims 1, 4, 6 and 7 and para. 0436. The claims of copending Application No. 10/806,453 fail to teach the addition of a chelating agent as claimed by applicants.

Causley et al. teach an ink jet ink set comprising a cyan ink, a magenta ink a yellow in and further contains a black ink. Causley et al. further teaches that a chelating agent may also be added to each ink of the ink set. See claims 1, 2 and 10.

Therefore, it would have been obvious to one having ordinary skill in the art to have added the chelating agent of Causley et al. to the ink composition of copending Application No. 10/806,453 since Causley et al. disclose that a chelating agent is a well known additive to ink jet ink compositions.

This is a provisional obviousness-type double patenting rejection.

11. Claims 1-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 10/645,797 (US 2004/0053988) in view of Causley et al.

The claims of copending Application No. 10/645,797 teach an ink jet ink set comprising a plurality of inks each containing at least one dye of the formula



Art Unit: 1755

wherein A, B and C each independently represents an aromatic group which may be substituted, or a heterocyclic group which may be substituted; m is an integer of 1 or 2; n is an integer of 0 or more, with the proviso that at least one of A, B and C is a heterocyclic group that may be substituted and optionally another dye having a λ_{max} of 350-500 nm. See claims 1-4 and para. 0367. The claims of copending Application No. 10/645,797 fail to teach the addition of a chelating agent as claimed by applicants.

Causley et al. teach an ink jet ink set comprising a cyan ink, a magenta ink a yellow in and further contains a black ink. Causley et al. further teaches that a chelating agent may also be added to each ink of the ink set. See claims 1, 2 and 10.

Therefore, it would have been obvious to one having ordinary skill in the art to have added the chelating agent of Causley et al. to the ink composition of copending Application No. 10/645,797 since Causley et al. disclose that a chelating agent is a well known additive to ink jet ink compositions.

This is a provisional obviousness-type double patenting rejection.

In the above copending applications, it is the examiner's position that it would have been obvious to one having ordinary skill in the art that: (1) the dye would have a λ_{max} of from 500-700 nm; (2) a half value width of 100 nm or more in an absorption spectrum of a dilute solution normalized to an absorbance of 1.0 and (3) a forced fading rate constant k_{vis} of 5.0×10^{-2} [hour⁻¹] or less since the dye of copending applications are the same structure as those claimed by applicants.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being obvious over Taguchi et al. (US 2004/0053988) in view of Causley et al.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Art Unit: 1755

Taguchi et al. teach an ink set comprising a plurality of ink different in hues wherein the plurality of inks includes a black ink containing a coloring agent that is a dye having a λ_{max} of from 500-700 nm; a half value width of 100 nm or more in an absorption spectrum of a dilute solution normalized to an absorbance of 1.0; and a forced fading rate constant k_{vis} of $5.0 \times 10^{-2} [\text{hour}^{-1}]$ or less. The dye is of the formula



wherein A, B and C each independently represents an aromatic group which may be substituted, or a heterocyclic group which may be substituted; m is an integer of 1 or 2; n is an integer of 0 or more, with the proviso that at least one of A, B and C is a heterocyclic group that may be substituted. The black ink optionally contains another dye having a λ_{max} of 350-500 nm. Taguchi et al. further teach that a chelating agent may also be added to the ink compositions. See paras. 0010-0015, paras. 0036-0045, paras. 0093-0096, Tables 1-6, paras. 0115-0117, para. 0367, Table A and claims 1-4. Taguchi et al. fails to specifically exemplify the addition of a chelating agent as claimed by applicants.

Therefore, it would have been obvious to one having ordinary skill in the art to have added the chelating agent as claimed by applicants as Taguchi et al. also discloses the use of these chelating agents but fails to show an example incorporating them.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Art Unit: 1755

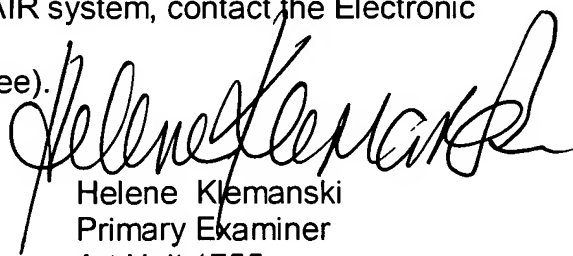
Conclusion

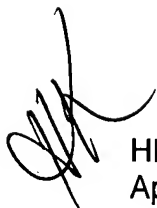
The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Klemanski whose telephone number is (571) 272-1370. The examiner can normally be reached on Monday-Friday 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Helene Klemanski
Primary Examiner
Art Unit 1755



HK
April 25, 2005